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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/647,095	08/22/2003	Egon Zimmermann	22624	9864
535	7590	09/14/2004	EXAMINER	
THE FIRM OF KARL F ROSS 5676 RIVERDALE AVENUE PO BOX 900 RIVERDALE (BRONX), NY 10471-0900			NOLAN JR, CHARLES H	
			ART UNIT	PAPER NUMBER
			2854	

DATE MAILED: 09/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/647,095	ZIMMERMANN ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Charles H Nolan, Jr.	2854	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 22 August 2003.

2a) This action is FINAL.                    2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 1-34 is/are pending in the application.

4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5) Claim(s) \_\_\_\_\_ is/are allowed.

6) Claim(s) 1-34 is/are rejected.

7) Claim(s) \_\_\_\_\_ is/are objected to.

8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on 22 August 2003 is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All    b) Some \* c) None of:

1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____ .
3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>8-22-03</u> .	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
	6) <input type="checkbox"/> Other: _____ .

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

- (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.
- (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-5,8-30,32-34 are rejected under 35 U.S.C. 102(a or e) as being clearly anticipated by US 2001/0051774 to Littrup et al.

With respect to Claims 1,6,23,27, Littrup teaches the launching step/source in paragraph [0035], the measuring step/device of potential difference in paragraph [0035] or magnetic field in paragraph [0041] and the correlating step/circuitry in paragraph [0023] or paragraph [0022]. With respect to Claims 2,24-25, Littrup teaches the orthogonal signals (electromagnetic current signals) in paragraph [0035] and the control and computing unit in his claim 92 @ (d) and it is noted that the Littrup invention operates on frequencies between 2Hz and 2MHz which require different generators.

With respect to Claim 3, Littrup teaches the sinusoidal signals in paragraph [0036]. With respect to Claim 4, Littrup teaches the Fourier analysis in paragraph [0102], which unavoidably necessarily includes the cosine and sine coefficient analysis. With respect to Claim 5, Littrup teaches the calculation of complex impedance using the Fourier

coefficients in paragraph [0102]. With respect to Claims 8,28, Littrup teaches at least three electrodes in paragraph [0036]. With respect to Claim 9, Littrup teaches the spaced apart electrodes (glove configuration) in paragraph [0036]. With respect to Claims 10-11,30,34, Littrup teaches the spaced apart relationship for measuring and correlating potential differences(voltages) in paragraphs [0035-0036]. With respect to Claim 12, Littrup teaches that the excitation electrodes are the same electrodes that measure the potential differences in paragraph [0035] and figures 6 and 7a. With respect to Claim 13, Littrup teaches the spike shape and electrically decoupled areas in figure 6. With respect to Claim 14, the Examiner considers the current source of Littrup in paragraph [0036] to be high ohmic as broadly recited by Applicant. With respect to Claims 17-18,29, Littrup teaches the excitation electrodes and current and magnetic(electromagnetic) field distributions in paragraphs [0017] and [0041]. With respect to Claims 19-20,33, Littrup teaches the at least three electrodes in paragraph [0036] and the magnetic field sensor in paragraph [0041] and his claim 153. With respect to Claim 21, Littrup teaches the alternating current in paragraphs [0036] and [0044]. With respect to Claim 22, Littrup teaches the voltage excitation in paragraphs [0064] and [0089]. With respect to Claim 26, Littrup teaches the electrodes in figure 6. With respect to Claims 15 and 32, an unavoidably necessary part of Littrup's invention is coils to produce the magnetic fields explicitly taught in paragraph [0041].

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 2854

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 6-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Littrup in view of Levene et al. (5,743,266).

With respect to Claims 6-7, Littrup teaches all the claim limitations except that the signal are coded(digital) signals taking on only two amplitudes. Levene teaches that the signals are coded (digital) signals taking on only two amplitudes in column 8, lines 13-17. It would have been obvious to one of ordinary skill in the art to use the coded signals of Levene in the invention of Littrup to avoid the expense of an A/D converter as taught by Levene in column 8, lines 13-17.

***Allowable Subject Matter***

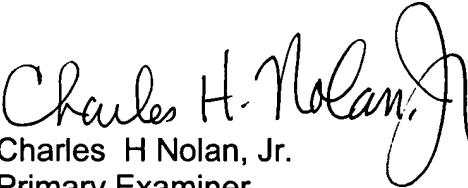
5. Claim 31 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

6. The following is a statement of reasons for the indication of allowable subject matter: The Examiner reserves comment until the entire instant application is in condition for allowance.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles H Nolan, Jr. whose telephone number is 571-272-2171. The examiner can normally be reached on Monday through Thursday 8:00 AM to 6:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Hirshfeld can be reached on 571-272-2168. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Charles H. Nolan, Jr.  
Primary Examiner  
Art Unit 2854

CHN